

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

To:
GLAXOSMITHKLINE
 Corporate Intellectual Property
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 Brentford, Middlesex TW8 9GG
 UNITED KINGDOM **Corporate IP**
Received BRENTFORD

14 JUN 2005

NOTIFICATION OF TRANSMITTAL OF
 THE INTERNATIONAL SEARCH REPORT AND
 THE WRITTEN OPINION OF THE INTERNATIONAL
 SEARCHING AUTHORITY, OR THE DECLARATION

15 JUN 2005

Received PCT/ISA
(PCT Rule 44.1)

Date of mailing
(day/month/year) 14/06/2005

| | | | | |
|--|--|-----------------------------|---|------------------------------|
| Applicant's or agent's file reference SCB/PB60729 | TM : N/A | ON URGED DATE 16/06/2005 | FOR FURTHER ACTION | See paragraphs 1 and 4 below |
| International application No. PCT/GB2005/000341 | INT'L SEARCH REPORT PCT/GB2005/000341 | | International filing date (day/month/year) | 01/02/2005 |
| Applicant GLAXO GROUP LIMITED | | | | |

1. The applicant is hereby notified that the International search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. The applicant is hereby notified that no International search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

- the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. Reminders

Shortly after the expiration of 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the International application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for International publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an International preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within 19 months from the priority date, but only in respect of some designated Offices, a demand for International preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later); otherwise, the applicant must, within 20 months from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of 30 months (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the International Searching Authority
 European Patent Office, P.O. 5810 Patentlaan 2
 NL-2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.
 Fax: (+31-70) 340-3016

Authorized officer

Federico Bonomelli

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

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| Applicant's or agent's file reference SCB/PB60729 | FOR FURTHER ACTION | |
| | see Form PCT/ISA/220 as well as, where applicable, Item 5 below. | |
| International application No. PCT/GB2005/000341 | International filing date (day/month/year) 01/02/2005 | (Earliest) Priority Date (day/month/year) 03/02/2004 |
| Applicant GLAXO GROUP LIMITED | | |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the International search was carried out on the basis of the International application in the language in which it was filed, unless otherwise indicated under this item.

The International search was carried out on the basis of a translation of the International application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the International application, see Box No. I.

2. Certain claims were found unsearchable (See Box II).

3. Unity of invention is lacking (see Box III).

4. With regard to the title,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

2-(PHENYLAMINO)-PYRIMIDIN-5-AMIDES AS CANNABINOID 2 RECEPTORS MODULATORS FOR THE TREATMENT OF IMMUNE OR INFLAMMATORY DISORDERS.

5. With regard to the abstract,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 30.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this International search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. _____

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

b. none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB2005/000341

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07D239/42 C07D405/12 A61K31/506 A61P37/04 A61P29/00
A61P19/02 A61P19/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, BEILSTEIN Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| X | WO 02/04429 A (ASTRAZENECA AB; ASTRAZENECA UK LIMITED; THOMAS, ANDREW, PETER; NEWCOMB) 17 January 2002 (2002-01-17) method 75 p. 71; methods 120 and 121 p.77 page 20, lines 9-18 | 1-8 |
| A | EP 0 569 912 A (HOECHST AKTIENGESELLSCHAFT) 18 November 1993 (1993-11-18) compounds 668,672,677,679,681,689,691,695 | 1-7 |
| | | -/- |

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
- *L* document which may throw doubt on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the International filing date but later than the priority date claimed

- *T* later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

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| Date of the actual completion of the International search | Date of mailing of the International search report |
| 6 June 2005 | 14/06/2005 |
| Name and mailing address of the ISA European Patent Office, P.O. 5018 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 | Authorized officer Schuemacher, A |

INTERNATIONAL SEARCH REPORT

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|---|
| International Application No PCT/GB2005/000341 |
|---|

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|---|-----------------------|
| A | SULLIVAN R.W., BIGAM C.G., ERDMAN P.E., PALANKI M.S.S, ANDERSON D.W. ET AL: "2-chloro-4-(trifluoromethyl)pyrimidine-5-N-(3',5'-bis(trifluoromethyl)phenyl)carbox amide" J.MEDICINAL CHEM., vol. 41, no. 4, 1998, pages 413-419, XP002328712 table 1; compound 5 | 1-7 |
| A | WO 97/09315 A (SIGNAL PHARMACEUTICALS, INC; SUTO, MARK, J; GOLDMAN, MARK, E; GAYO, LE) 13 March 1997 (1997-03-13) example 46; table 1 | 1-8 |
| A | WO 02/066036 A (BRISTOL-MYERS SQUIBB COMPANY) 29 August 2002 (2002-08-29) claim 1 | 1-8 |
| P,Y | WO 2004/029026 A (GLAXO GROUP LIMITED; EATHERTON, ANDREW, JOHN; GIBLIN, GERARD, MARTIN,) 8 April 2004 (2004-04-08) claims 1,7-9 | 1-10 |
| P,Y | WO 2004/029027 A (GLAXO GROUP LIMITED; EATHERTON, ANDREW, JOHN; GIBLIN, GERARD, MARTIN,) 8 April 2004 (2004-04-08) claims 1,7-9 | 1-10 |
| P,X | WO 2004/018433 A (GLAXO GROUP LIMITED; EATHERTON, ANDREW, JOHN; GIBLIN, GERARD, MARTIN,) 4 March 2004 (2004-03-04) cited in the application the whole document | 1-10 |
| P,X | WO 2004/018434 A (GLAXO GROUP LIMITED; EATHERTON, ANDREW, JOHN; GIBLIN, GERARD, MARTIN,) 4 March 2004 (2004-03-04) the whole document | 1-10 |

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB2005/000341

Box II Observations where certain claims were found unsearchable (Continuation of Item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 9 and 10 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of Item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/G82005/000341

| Patent document cited in search report | | Publication date | | Patent family member(s) | Publication date |
|--|---|------------------|--|---|--|
| WO 0204429 | A | 17-01-2002 | AU BG BR CA CN CZ EE EP WO HU JP NO NZ PL SK TW US ZA | 6931701 A 107451 A 0112420 A 2415486 A1 1454210 A 20030076 A3 200300020 A 1303496 A1 0204429 A1 0301722 A2 2004502763 T 20030146 A 523357 A 360385 A1 282003 A3 221470 B 2003216406 A1 200300079 A | 21-01-2002 30-09-2003 24-06-2003 17-01-2002 05-11-2003 16-04-2003 15-10-2004 23-04-2003 17-01-2002 29-12-2003 29-01-2004 10-01-2003 30-07-2004 06-09-2004 01-07-2003 01-10-2004 20-11-2003 05-05-2004 |
| EP 0569912 | A | 18-11-1993 | AU EP HU JP ZA | 3855493 A 0569912 A1 63941 A2 6032784 A 9303373 A | 18-11-1993 18-11-1993 29-11-1993 08-02-1994 09-12-1993 |
| WO 9709315 | A | 13-03-1997 | US AU AU AU AU CA CA EP JP JP WO WO US | 5811428 A 726058 B2 7013096 A 726522 B2 7163196 A 2230894 A1 2230896 A1 0850228 A1 11512390 T 11512399 T 9709325 A1 9709315 A1 5935966 A | 22-09-1998 26-10-2000 27-03-1997 09-11-2000 27-03-1997 13-03-1997 13-03-1997 01-07-1998 26-10-1999 26-10-1999 13-03-1997 13-03-1997 10-08-1999 |
| WO 02066036 | A | 29-08-2002 | CA CZ EP HU JP MX NO WO US | 2438231 A1 20032233 A3 1361879 A1 0303841 A2 2005508833 T PA03007395 A 20033683 A 02066036 A1 2002183335 A1 | 29-08-2002 15-12-2004 19-11-2003 01-03-2004 07-04-2005 04-12-2003 17-10-2003 29-08-2002 05-12-2002 |
| WO 2004029026 | A | 08-04-2004 | AU WO | 2003268907 A1 2004029026 A1 | 19-04-2004 08-04-2004 |
| WO 2004029027 | A | 08-04-2004 | AU WO | 2003276028 A1 2004029027 A1 | 19-04-2004 08-04-2004 |
| WO 2004018433 | A | 04-03-2004 | AU CA WO | 2003264076 A1 2495880 A1 2004018433 A1 | 11-03-2004 04-03-2004 04-03-2004 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB2005/000341

| Patent document cited in search report | Publication date | Patent family member(s) | | Publication date |
|--|------------------|-------------------------|--|------------------|
| WO 2004018434 | A 04-03-2004 | AU 2003260436 A1 | | 11-03-2004 |
| | | WO 2004018434 A1 | | 04-03-2004 |
| | | EP 1534687 A1 | | 01-06-2005 |